

What is claimed is:

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A 2
1. An isolated polynucleotide comprising:
(a) SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 or 13;
5 (b) a fragment of at least 15 contiguous nucleobases of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 or 13;
(c) a nucleic acid sequence which, due to degeneracy in genetic coding, comprises variations in nucleotide sequence as compared to SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,
10 12 or 13, but which still encodes the same protein; or
(d) a nucleic acid sequence which hybridizes under stringent conditions to an antisense sequence of SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 or 13.
2. An antisense oligonucleotide which hybridizes to a
15 polynucleotide of claim 1.
3. A vector comprising the polynucleotide of claim 1.
4. A host cell expressing the vector of claim 3.
5. A method for producing a SSG polypeptide comprising culturing the host cell of claim 4 under conditions which
20 promote expression of the polynucleotide and isolating polypeptide expressed in the cells.
6. A method for producing a cell expressing a SSG polypeptide comprising transforming or transfecting a cell with the vector of claim 3 so that the cell, under appropriate
25 culture conditions, expresses a SSG polypeptide.
7. A polypeptide encoded by the polynucleotide of claim 1.

8. An antibody which is immunospecific for the polypeptide of claim 7.

9. A SSG for diagnosing stomach cancer comprising a polynucleotide of claim 1 or a polypeptide encoded thereby.

5 10. A method for diagnosing the presence of stomach cancer in a patient comprising:

(a) determining levels of a SSG of claim 9 in cells, tissues or bodily fluids in a patient; and

10 (b) comparing the determined levels of SSG with levels of a SSG of claim 9 in cells, tissues or bodily fluids from a normal human control, wherein a change in determined levels of SSG in said patient versus normal human control is associated with the presence of stomach cancer.

15 11. A method of diagnosing metastases of stomach cancer in a patient comprising:

(a) identifying a patient having stomach cancer that is not known to have metastasized;

(b) determining levels of a SSG of claim 9 in a sample of cells, tissues, or bodily fluid from said patient; and

20 (c) comparing the determined SSG levels with levels of a SSG of claim 9 in cells, tissue, or bodily fluid of a normal human control, wherein an increase in determined SSG levels in the patient versus the normal human control is associated with a cancer which has metastasized.

25 12. A method of staging stomach cancer in a patient having stomach cancer comprising:

(a) identifying a patient having stomach cancer;

(b) determining levels of a SSG of claim 9 in a sample of cells, tissue, or bodily fluid from said patient; and

30 (c) comparing determined SSG levels with levels of a SSG of claim 9 in cells, tissues, or bodily fluid of a normal

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5 regressing or in remission.

for the onset of metastasis comprising:

not known to have metastasized;

10 (b) periodically determining levels of a SSG of claim 9
in samples of cells, tissues, or bodily fluid from said
patient; and

(c) comparing the periodically determined SSG levels with levels of a SSG of claim 9 in cells, tissues, or bodily fluid of a normal human control, wherein an increase in any one of the periodically determined SSG levels in the patient versus the normal human control is associated with a cancer which has metastasized.

14. A method of monitoring a change in stage of stomach
20 cancer in a patient comprising:

(a) identifying a patient having stomach cancer;

(b) periodically determining levels of a SSG of ~~claim~~ 9 in cells, tissues, or bodily fluid from said patient; and

(c) comparing the periodically determined SSG levels with
25 levels of a SSG of claim 9 in cells, tissues, or bodily fluid
of a normal human control, wherein an increase in any one of
the periodically determined SSG levels in the patient versus
the normal human control is associated with a cancer which is
progressing in stage and a decrease is associated with a
30 cancer which is regressing in stage or in remission.

15. A method of identifying potential therapeutic agents for use in imaging and treating stomach cancer comprising

screening molecules for an ability to bind to a SSG of claim 9 wherein the ability of a molecule to bind to SSG is indicative of the molecule being useful in imaging and treating stomach cancer.

- 5 16. A method of imaging stomach cancer in a patient comprising administering to the patient the antibody of claim 8.

17. The method of claim 16 wherein said antibody is labeled with paramagnetic ions or a radioisotope.

- 10 18. A method of treating stomach cancer in a patient comprising administering to the patient the antibody of claim 8.

19. The method of claim 18 wherein the antibody is conjugated to a cytotoxic agent.

- 15 20. A method for identifying compounds which antagonize or agonize the SSG polypeptide of claim 7 comprising:

(a) contacting cells which express the SSG polypeptide of claim 7 or cell membranes expressing the SSG polypeptide of claim 7 with a candidate compound; and

- 20 (b) monitoring the cells for changes in SSG polypeptide activities or binding as compared to cells or cell membranes not contacted with the candidate compound.

21. A SSG polypeptide agonist identified by the method
25 of claim 20.

22. A SSG polypeptide antagonist identified by the method of claim 20.

23. A vaccine comprising a SSG polypeptide or a vector expressing a SSG polypeptide which induces an immune response against the SSG polypeptide in a mammal.

24. A method of inducing an immune response against a
5 SSG polypeptide in a mammal which comprises administering to
the mammal the vaccine of claim 23.

25. A method of treating stomach cancer in a patient comprising administering to the patient the vaccine of claim 23.